

ABSTRACT

“COMPARISON OF THERAPEUTIC RESPONSE TO SEQUENTIAL THERAPY WITH MICRODERMABRASION AND LASER TREATMENT, NEWER TOPICAL TRANEXAMIC ACID IN COMBINATION AND CHEMICAL PEELING IN THE MANAGEMENT OF MELASMA”

INTRODUCTION

Hypermelanosis affecting predominantly face and the neck is a common disorder especially in Indian patients and has a significant impact on their quality of life. Melasma is one such condition prevalent in all parts of the world. It is a common acquired hypermelanosis occurs mainly in sunexposed areas and is predominantly seen in women. The aetio-pathogenesis of melasma is complex with various factors implicated in the causative role; however the precise cause is still unknown. A clear awareness of the etiology of melasma will assist in better treatment of this resistant condition. A wide variety of agents are available for treatment of melasma which include various topical agents, chemical peels, lasers and light sources.

AIMS & OBJECTIVES:

- **Aim :** To study and compare the effect of various treatment modalities in the management of Melasma.

- **Objective:** To observe and compare the therapeutic response of sequential therapy with microdermabrasion followed by laser treatment Vs newer topical tranexamic acid in combination Vs chemical peeling in the management of melasma.

STUDY DESIGN:

Prospective experimental study

SAMPLE SIZE :

90 patients divided into three groups – each group consists of 30 patients.

METHODOLOGY:

The patients were interviewed in person. Initially a detailed history was taken regarding the age of onset, duration of pigmentation, occupation, family history, relation to pregnancy, drug intake in the form of OCP, antiepileptics and any other precipitating factors. Diagnosis was made clinically. Wood's lamp examination was done to note the type of melasma. Clinical grading was done based on the mMASI score. All the patients were divided into 3 groups A, B and C randomly for therapeutic intervention after obtaining the consent, which included

- Group A : Sequential therapy with microdermabrasion followed by Q-switched Nd Yag Laser – 4 sittings at monthly intervals
- Group B : Topical Tranexemic Acid 10% in combination with other newer topicals for 16 weeks
- Group C : Glycolic acid peel for 16 weeks once in 2 weeks.

Each group consisted of 30 patients. response was assessed by mMASI score and graded based on the degree of improvement observed clinically.

- Less than 50% improvement - Moderate response
- 50 – 75% improvement - Good response
- Greater than 75% improvement - Very good response

The results were compared between the three groups and analysed statistically.

RESULTS:

Melasma was most common in females in the age group of 31-40 years. Patients mostly presented after a duration of 2 – 5 years. The most common precipitating factor was sun exposure seen in 63.33% . Positive family history was seen in 16.66% cases and 35%. Other factors like , drugs and anemia also played a minor role. Thyroid disorders were found to be associated with 8.88% of cases of melasma. The most common morphological pattern was centrofacial type 52.22%, while mixed type 55.55% was the most common based on Woods lamp. In GA group 6.66% showed excellent response with >75% fall in MASI score while majority showed 93.3% good response. In MDA + Nd:YAG laser group 43.33% showed good response and 56.66% showed excellent response at the end of 4 months. In TXA group, 66.66% showed good response and 26.66% showed moderate response, only 6.66%

showed excellent results. All the three modalities of treatment were found to be efficacious with MDA + Nd:YAG laser being most effective. Epidermal type of melasma showed excellent results with Nd:YAG laser & TXA . Dermal type of melasma showed excellent results with GA peel. Among 3 groups, MDA+ Nd:YAG laser was most effective with fewer side effects & better tolerated,. Followed by GA peel. Topical TXA combination having slightly less improvement when compared to other 2 groups but better tolerated with least side effects.

CONCLUSION:

This study emphasizes the importance of using GA peel for dermal & epidermal type of melasma with good results & MDA+ Nd:YAG laser therapy for the recalcitrant dermal & mixed type melasma with high efficacy and safety with complete remission in some patients. Topical TXA combination can be used for epidermal type of melasma with good efficacy & low side effects.